

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for monitoring a condition of a patient under anesthesia or sedation, the method comprising the steps of:
 - acquiring at least a first signal representing a cardiovascular activity of the patient;
 - deriving, from said first signal, at least a first and a second parameter value, said first and second parameter values being related to two mutually different quantities selected from a group of quantities including waveform amplitudes, waveform periodicity, waveform morphology, and waveform variability;
 - applying a predetermined mathematical index for probability of patient comfort, in which index said at least first and second parameters are variables;
 - calculating successively changing values of said mathematical index; and
 - indicating said successive index values.
2. (Cancelled)
3. (Original) A method according to claim 1, wherein said first signal concerning cardiovascular activity is a blood volume signal measured non-invasively using photoplethysmography.
4. (Original) A method according to claim 3, wherein:
 - the quantity for said first parameter value is a pulse wave amplitude, or a dicrotic notch height in the pulse wave;
 - and the quantity for said second parameter value is a pulse rate, or a heart beat interval, or a temporal position of the dicrotic notch.

5. (Original) A method according to claim 1, wherein said first signal concerning cardiovascular activity is blood pressure signal measured using a pressure metering.

6. (Original) A method according to claim 5, wherein:

- the quantity for said first parameter value is a systolic, diastolic or mean blood pressure, or a dicrotic notch height in the pulse wave;
- and the quantity for said second parameter value is a pulse rate, or a heart beat interval, or a temporal position of the dicrotic notch.

7. (Original) A method according to claim 1, wherein said mathematical index for probability is a nonlinear equation.

8. (Original) A method according to claim 1, wherein said mathematical index for probability is a neural network algorithm.

9. (Original) A method according to claim 1, wherein said mathematical index for probability is based on a defined or fuzzy rule-based reasoning procedure.

10. (Original) A method according to claim 1, further comprising the step of normalizing said first and second parameter values on the basis their respective parameter values acquired over a predetermined fixed time window including or excluding the latest real-time parameter value.

11. (Original) A method according to claim 10, wherein said normalized parameter values are acquired from:

- said patient prior to incision, or prior to intubation, or prior to starting anesthesia or sedation, or
- group of patients prior to or during incision and/or intubation and/or anesthesia or

sedation.

12. (Currently Amended) A method for monitoring a condition of a patient under anesthesia or sedation, the method comprising the steps of:

- acquiring at least a first signal and a second signal representing a cardiovascular activity of the patient;
- deriving, from said first signal and second signal, at least a first and a ~~third~~second parameter value, said first and second parameter values being related to two mutually different quantities selected from a group of quantities including waveform amplitudes, waveform periodicity, waveform morphology, and waveform variability;
- applying a predetermined mathematical index for probability of patient comfort, in which index said at least first and ~~third~~second parameters are variables;
- calculating successively changing values of said mathematical index; and
- indicating said successive index values.

13. (Cancelled)

14. (Original) A method according to claim 12, wherein said first signal concerning cardiovascular activity is a blood volume signal measured non-invasively using photoplethysmography, or measured using a pressure metering.

15. (Original) A method according to claim 14, wherein the quantity for said first parameter value is a pulse wave amplitude, or a systolic, diastolic or mean blood pressure, or a dicrotic notch height in the pulse wave.

16. (Original) A method according to claim 12, wherein said second signal concerning cardiovascular activity is a cardiac excitation measured non-invasively using electrocardiogram.

17. (Currently Amended) A method according to claim 16, wherein the quantity for said ~~third~~second parameter value is a heart rate or inter beat interval of the electrical excitation.

18. (Original) A method according to claim 12, wherein said mathematical index for probability is a nonlinear equation.

19. (Original) A method according to claim 12, wherein said mathematical index for probability is a neural network algorithm.

20. (Original) A method according to claim 12, wherein said mathematical index for probability is based on a defined or fuzzy rule-based reasoning procedure.

21. (Currently Amended) A method according to claim 12, further comprising the step of normalizing said first and ~~third~~second parameter values on the basis their respective parameter values acquired over a predetermined fixed time window including or excluding the latest real-time parameter value.

22. (Original) A method according to claim 21, wherein said normalized parameter values are acquired from:

- said patient prior to incision, or prior to intubation, or prior to starting anesthesia or sedation, or
- group of patients prior to or during incision and/or intubation and/or anesthesia or sedation.

23-53. (Cancelled)